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Reported in an evaluation of a program of State aid for experimental programs was an overview of the legislation and administration governing such programs. A purpose of the financial aid to local school districts willing to experiment with innovations to improve instructional quality was to promote the scientific method in attacking teaching and learning problems.

Through the seventh year of operation, 74 projects were undertaken with 166 districts participating a total of 227 times. While local districts invested $1,000,000, the State Education Department contributed $1,500,000. The original legislation related to science and mathematics, but the coverage was broadened in later years; additional changes were liberalization of resources and State-aid payments.

Program evaluation was based on the extent of school district participation, the emergence of new ideas, the ability of local school districts to conduct research, and the dissemination of findings. The growth in numbers of districts, teachers, and pupils involved was great, but experimentation was limited to wealthier districts, those with large enrollments, and those close to colleges. Through the projects, almost all of the new instructional approaches at the elementary and secondary levels were introduced. The ability of local school districts to conduct research was questioned because almost one third of the projects were not completed; outside consultants were heavily relied on; and there was great turnover among personnel. Although the projects were publicized through journal articles, newspapers, conferences, and responses to inquiries, no systematic means for reporting and making available the findings were devised.

Recommendations were made for involvement of a more representative group of districts, expansion of topics for investigation, better dissemination of findings, more definitive statements of objectives and methodology, greater control of the teacher variable, consideration in the experiments of classifications of pupils within groups, and the recruitment of specialists trained in education research.

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EXPERIMENTATION
AND
INNOVATION

A Seven-Year Report

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U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
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FOREWORD

Experimentation and innovation have become the watchwords of education in the sixties. Never before has there been such an emphasis on instructional change and evaluation. Never before has so much money been made available for trying and testing new approaches to the teaching task. The Federal government's large-scale intervention into elementary and secondary education reflects the widely-held conviction that educational change based on research offers the solution to many problems of our present society.

This report on Experimentation and Innovation describes and anaylzes a pioneer program in school district research sponsored by the New York State Education Department. Drawing on seven years of experience, the report makes a number of recommendations for improving the conduct of research in the public schools and assuring a fuller measure of success. These recommendations are of special import for schoolmen in New York State where the Legislature has this year increased its annual appropriation for Experimental Programs by 50 percent to $450,000. They deserve the attention of educators everywhere for the problems they attack are not peculiar to research in the schools of New York State; the suggestions made are germane to school research regardless of its setting.

This report is offered then with the hope that the experience of this Department with State Aid for Experimental Programs may contribute on a broad scale to the more effective use of time, money, and personal efforts in improving instruction through research and innovation. In making it available, special acknowledgment is given to Dr. Edmund H. Crane who is responsible for the program and supervised the authors in their work with the projects.

Lorne H. Woollatt
Associate Commissioner for
Research and Evaluation

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CHAPTER I

INTRODUCTION

In 1958, the continuous efforts of the New York State Education Department to provide better education for an ever-growing pupil population took a radically different approach with the establishment of State Aid for Experimental Programs, a program of special financial assistance for local school districts willing to experiment with innovations to improve the quality of instruction.

The encouragement of innovation was a major goal of the new program, but change for the sake of change was not desired. Of equal importance was the stimulation of rigorous evaluation to assure a valid basis for change. Each experimental program approved for State support was to include a research design, a plan for a thorough assessment of the ability of the innovation to actually improve the quality of instruction. In short, State Aid for Experimental Programs was to be a vehicle for promoting the scientific method--the objective testing of hypotheses--in attacking problems in classroom instruction.

The Department's faith in this new venture was epitomized in one of Associate Commissioner Crewson's early letters inviting school district participation:

> "Our greatest hope for discovering and accelerating the use of improved instructional programs lies in carefully controlled experimentation. There is no type of activity that will contribute more toward the professional growth and outlook of classroom teachers and administrators than an experimental search for more effective educational programs, in the areas of course content, methods of teaching and suitable services and facilities. An incentive has been established. Will you take up the challenge?"[1]

---

[1] Letter to City, Village, and District Superintendents and Supervising Principals, October 24, 1958.

State Aid for Experimental Programs is now in its seventh year of operation. To date, 74 projects have functioned with 166 different districts participating a total of 227 times. The local districts have invested one million dollars in these projects while the State Education Department has contributed a million and a half. This is patent proof that the challenge to experiment has not gone unheeded. There is need, however, for an analytic evaluation of the quality of the response and the extent to which Experimental Programs has served as a catalyst in spreading the practice of innovation and evaluation. Before undertaking such an evaluation an overview of the legislation governing Experimental Programs and the administration of the program is in order.

CHAPTER II

LEGISLATION AND PROGRAM ADMINISTRATION

Legislation

The immediate impetus for the 1958 legislation establishing State Aid for Experimental Programs was the launching of Sputnik I in October 1957. Reflecting the overriding concerns of American education in the face of the Russian achievement, the New York State legislation focused attention on mathematics, science, and the gifted. The law provided that special assistance be given to local school districts undertaking experimentation "for the purpose of improving the quality of education in science and mathematics and for the purpose of providing special educational services and facilities for pupils of greater than average ability." In 1960, however, English and foreign languages were added to the subjects for investigation. In 1963, the Commissioner of Education was authorized to extend the program to other subjects and other groups or categories of pupils as he might determine. Last year, social studies and programs for disadvantaged children were designated for support.

Along with broadening the scope of Experimental Programs, the legislation of the past six years has liberalized resources, State-aid payments, and the use of funds.

The 1958 law set a limit of $200,000 on the monies for Experimental Programs. Since 1961 the annual appropriation has been $300,000. Initially State-aid payments were to be made on the basis of state-aid ratios and the approved excess costs of the experimental programs--costs over and above normal costs of instruction in the area under study. In 1961, a guarantee of a minimum aid payment of 50 percent of the approved excess costs was written into the law. While in 1958 local school districts were designated as the sole recipients of the aid, in 1961 boards of cooperative educational services were made eligible for the assistance. Furthermore, in 1961, the Commissioner of Education was authorized to use monies appropriated for Experimental Programs for the employment of consultants to assist local districts and cooperative boards in planning Experimental Programs. Finally, in 1963, the Commissioner was given discretionary power to initiate Experimental Programs and to use the personnel and facilities of the Education Department and any funds made available by the Regents to assist in the development and execution of Experimental Programs.

Program Administration

Application Procedures

The 1958 legislation establishing State Aid for Experimental Programs provided the framework for administration of the program. The law specified that applications be submitted by May 15 and that they include a complete statement of the purpose of the program, the detailed procedures of operation and evaluation to be used, the expected duration of the program, and a detailed estimate of the excess cost of the program. It further provided that the applications received be evaluated and ranked in accordance with their educational value and merit and that funds be allotted to the projects on the basis of their rank order to the extent that monies are available.

Because the Experimental Program legislation was not passed until April of 1958, there was no time to translate the directives of the law into a formal application procedure for the first application period. Within six months, however, application instructions were prepared which, with appropriate updating, are still in use. The format prescribed in these instructions is that generally called for in research proposals. Detailed criteria for the evaluation of applications were also developed as guides for both the reviewers and those preparing applications. These are given in appendix A.

It has become standard practice to announce the availability of State monies for experimentation soon after the first of the year. A letter concerning changes in the law and needs in research is forwarded to superintendents and supervising principals throughout the State. Early submission of applications, well in advance of the May 15th deadline, is encouraged in order that there may be time for the development of promising ideas into feasible projects. Throughout the year, members of the State Education Department are available to consult with districts on the development of projects. The Department may also employ consultants from colleges and universities to assist districts in the preparation of research proposals.

The applications submitted are reviewed by Department specialists in both instruction and research. The districts are notified of the action taken on their proposals before July 1, the beginning of the new school year.

While the application procedures have remained the same since they were first formalized in 1958, there has been a change in the Department's role in fostering project development. In addition to giving assistance to individual districts wishing to undertake research, in recent years the Department has taken the lead in initiating multidistrict projects.

Multidistrict Projects

Early experience with Experimental Programs showed that many districts interested in experimentation lacked sufficient numbers of pupils and classes to give validity to their findings. The multidistrict study incorporating a number of school systems promised a solution to this problem. It also opened the way to more economic use of Experimental Program funds for many of the costs arising from research are substantially the same regardless of the size of the project sample. To date, 15 of the 74 State-Aided Experimental Programs have been multidistrict studies. Only one such program was operative in 1958; it was a cooperative venture of 15 districts working through two boards of cooperative educational services. This year there are nine multidistrict studies in operation; five of these were started in 1964.

When the State has undertaken the initiation of a multidistrict study, it has been because there are recurring inquiries on a given topic--indicative of a need for research findings--or because a number of districts have proposed similar investigations. The current procedure for launching a multidistrict study involves first a statewide survey to determine those schools which are employing or contemplating the use of a particular innovation. Districts reporting an interest in the innovation are then invited to explore with a consultant and Department staff the feasibility of a tentative research proposal. The proposal is discussed in conference and modified as needed. The modified proposal serves as a basis for decision-making for the districts agreeing to participate must adhere to the conditions of the research design.

College and university faculty members have been called upon to direct a number of multidistrict studies initiated by the Department. Research services are provided by their institutions on a contract basis. The contract costs are borne entirely by the State Education Department.

The economic advantage of the multidistrict study is demonstrated by table 1 which shows the cost per district of single-district and multidistrict projects from 1958-59 through 1964-65.

Table 1

Average Cost of Single-District and Multidistrict Experimental Programs 1958 - 1965

Year	Single-district projects		Multidistrict projects		
	No.	Cost per district[a]	No.	Number of districts[b]	Cost per district[a]
1958-59	17	$ 8 539	1	15	$ 1 021
1959-60	19	12 498	1	15	834
1960-61	21	16 711	2	38	799
1961-62	31	12 638	3	41	616
1962-63	14	15 460	5	35	3 899
1963-64	12	13 348	5	54	3 434
1964-65	9	9 355[c]	9	92	3 801[c]

[a] Average based on total of State aid and local contributions.

[b] Districts in more than one project counted by number of participations.

[c] Estimate.

As noted, the cost per district in table 1 is an average figure based on the total costs of the projects, State aid plus local contributions, and the numbers of districts.

Payment of State Aid

State aid for Experimental Programs is paid in two installments. The sponsoring districts receive one half of their estimated aid in the fall of the school year. The balance is paid in the following September on the basis of actual expenditures. Colleges and universities providing research services for

Experimental Programs on a contract basis likewise receive two payments, one after submission of a mid-year progress report and the second in the following September.

Continuation of State Aid

Approval of an Experimental Program for State aid is for one year only, although the majority of projects are planned for two, three, or more years. It is therefore necessary for the districts to apply for continued support. These continuation requests, due April 1, must cover the progress of the project as well as plans for the future. While ongoing projects are given priority in the allocation of Experimental Program monies, continuation requests are reviewed in the same manner as new applications and approval for one year neither guarantees nor prejudices the continuation of assistance.

District Obligations

School districts and cooperative boards receiving State aid for Experimental Programs are required to submit year-end reports covering the operation and findings of the program and actual expenditures. Payment of the second State-aid installments are contingent upon the submission of satisfactory year-end reports.

Any materials developed in connection with Experimental Programs are considered the property of the State of New York and must be copyrighted in the name of the State. The publication of findings is the privilege of the school districts and boards of cooperative educational services and is encouraged by the State Education Department.

CHAPTER III

EVALUATION OF THE PROGRAM

The evaluation of State Aid for Experimental Programs must be made in terms of its objectives: To encourage school districts to adopt innovations for instructional improvement and to evaluate their efficacy by an experimental design. These objectives have immediate realization in the activities of school districts operating Experimental Programs. They may also be realized in the diffusion of interest in experimentation and innovation to school districts other than those receiving the special State aid, and they may be further realized when the results of Experimental Programs effect regular school practices.

Considering the multiple possibilities for the achievement of Experimental Program goals, the following criteria have been selected for the evaluation:

1. The extent of school district participation.
2. The emergence of new ideas.
3. The ability of local school districts to engage in research.
4. The dissemination of findings.

These criteria were initially suggested by Lorne H. Woollatt, Associate Commissioner for Research, in an address to the 1961 staff conference of the New York State Education Department.[1] They were used in an earlier evaluation of the program undertaken after three years of operation.[2]

---

[1] "An Evaluative Report of On-Going Department Programs," paper presented at the Staff Conference, New York State Education Department, June 15-16, 1961.

[2] Gerald T. Kowitz and Ruth Salter, "Experimentation for the Improvement of Instruction," (Albany: The State Education Department, August 1961).

School District Participation

Extent of Participation

The extent of school district participation is the easiest of the evaluative criteria to apply since the pertinent information is readily quantifiable. Participation may be gauged by the numbers of applications submitted, projects supported, and districts, pupils, and teachers involved. Table 2 gives these figures for the seven years of Experimental Program operation.

Table 2

Experimental Programs
1958 - 1965

School year	Applications received	Projects supported	Number of participants		
			Districts[a]	Pupils	Teachers
1958-59	133[b]	18	32	2 042	89
1959-60	43	21	33	3 552	113
1960-61	51	23	57	6 368	204
1961-62	49	34	65	10 934	494
1962-63	41	19	44	7 768	171
1963-64	23[c]	17	59	12 748	476
1964-65	40	18	87	24 775	880

[a] Districts participating in two or more projects counted only once each year.

[b] Figure includes many proposals made in letters and phone conversations before establishment of formal application procedures.

[c] Application announcement delayed until 4/26/63.

As indicated in table 2, the numbers of applications received and projects supported have been relatively constant over the seven-year period while the numbers of districts, pupils, and teachers participating have increased markedly. This contrast, with the suggestion of a static condition on one hand and evidence of dynamic growth on the other, calls for some analysis of the figures in question.

The announcement of State Aid for Experimental Programs in 1958 brought a sudden rush of applications, many of which were merely ideas for innovation rather than full-fledged research proposals. Since application procedures were formalized, the number of applications has been relatively stable. The stability of the application figure may be attributed to the legislative changes adding new subjects to the categories eligible for support. Were it not for this broadening of the program over the years, the number of applications might well have declined as there is a limit to the number of innovations to be tested in any given field.

The number of projects operating rose only moderately in the first three years of the program and then peaked in 1961-62 when the annual appropriation for Experimental Programs jumped from $200,000 to $300,000. The 50 percent rise in funds available was matched by an increase of nearly 50 percent in the number of projects supported. In 1962-63, however, the number dropped sharply and has remained quite constant since. The decrease in 1962-63 was due in part to the completion of some of the initial studies and the discontinuation of seven pilot projects which failed to materialize in 1961-62. The major factor in the restricted number of projects operating in the latter years has been the priority given multidistrict studies.

It is the multidistrict study which accounts, in turn, for the marked increase in the number of districts participating in Experimental Programs. The current figure for district participation is nearly three times that of 1958-59. While there was only 1 multidistrict study with 15 districts in 1958, today there are 9 such studies with 84 districts involved. Multidistrict studies have capitalized on the willingness of more and more districts to try new instructional approaches and to cooperate in evaluative activities. The cooperative evaluation has, in effect, expanded the coverage of the funds available, for many aspects of a research program cost no more whether there be one thousand or one hundred pupils, thirty teachers or three.

Most dramatic of the changes in Experimental Program participation are the increases in the numbers of pupils and teachers. The number of pupils involved is twelve times as great in 1964-65 as in 1958-59. The current teacher figure is ten times that of the initial year. These indices of pupil and teacher participation are probably the best measures of the extent to which Experimental Programs have permeated the schools. They are especially pertinent in any evaluation of the program as it is only through the interaction of teachers and students that innovations will meet the ultimate goal of Experimental Programs--the improvement of instruction. The data on pupil and teacher participants is clear-cut evidence of the success of the program.

Characteristics of Participating Districts

A thorough analytic evaluation of school district participation must take into consideration not only the number of districts sponsoring programs but the characteristics of those districts in terms of size, wealth, and location as well. Such analyses will show to what extent Experimental Program districts are representative of the State as a whole. They will also provide answers to questions raised about the effects of school district size and wealth on participation in Experimental Programs.

School district size. The first characteristic to be examined is school district size as indicated by fall enrollment. Table 3 compares the median fall enrollments for the Experimental Program districts with the quartile figures for the State as a whole for the first six years of program operation.

Table 3

Fall Enrollments
New York State and Experimental
Program Districts

School year	New York State			Experimental program median
	Q1	Median	Q3	
1958-59	272	882	1 960	2 808
1959-60	345	976	2 077	3 214
1960-61	385	1 054	2 562	2 009
1961-62	443	1 171	2 851	1 730
1962-63	491	1 304	3 121	3 762
1963-64	552	1 434	3 350	3 878

Inspection of the data in table 3 shows that each year the median enrollment for the program districts has been substantially greater than the median for the State. In four of the six years, the program median has exceeded the third quartile for the State as a whole. In terms of size, then, the Experimental Program districts as a group are not typical of the State as a whole. The preponderance of larger districts in the Experimental Program groups is further revealed in table 4.

Table 4

Fall Enrollments Cumulative Percentages of Experimental Program Districts below State Quartiles

School year	Q_1	Median	Q_3
1958-59	0	0	55
1959-60	0	0	50
1960-61	9	38	63
1961-62	11	46	63
1962-63	0	14	39
1963-64	0	15	39
Average--all years	3	19	51

The discrepancy between expected and actual percentages is considerable at each quartile. Most striking, however, is the limited number of Experimental Program districts in the first quartile for enrollment. It can be said that, in general, the smallest districts of the State have not responded to the challenge of Experimental Programs to upgrade instruction through innovation and evaluation. Two reasons for this are readily apparent: (1) Small enrollments preclude program diversity and the possibility of innovation, and (2) with only one class at a grade level, small school districts cannot provide the control classes required by experimental designs.

School district wealth. The second characteristic of concern in analyzing school district participation in Experimental Programs is school district wealth as indicated by the fiscal support given to education. Table 5 compares median expenditures for Experimental Program districts with quartile figures for the State as a whole for the seven years of program operation. The figures cited are for the school year preceding program operation for it is the fiscal experience of the preceding year which determines the equalization ratio used in calculating Experimental Program aid.

Table 5

Educational Support*
New York State and Experimental
Program Districts

School year ending	New York State			Experimental program median
	Q_1	Median	Q_3	
1958	$375	$414	$468	$475
1959	404	442	503	505
1960	428	469	538	527
1961	454	492	563	542
1962	466	504	581	532
1963	499	537	619	596
1964	522	563	654	649

*1958 - 1961 = Net Current Expenditures per WADA
1962 - 1964 = Approved Operating Expenditure per WADA

As shown in table 5, the median expenditure for the Experimental Program districts exceeded the third quartile for the State as a whole in the first two years of operation and has since been only slightly below it. Analysis of more detailed data for the latter five years shows the median expenditure for Experimental Program districts to be close to the 70th percentile each year. These data indicate that a positive relationship exists between school district wealth and willingness to undertake the evaluation of educational innovations. This is partially accountable to the specification that State aid for Experimental Programs be based on excess costs, costs above and beyond normal program expenditures in the same area.

The extent to which Experimental Programs have been limited to the wealthier districts is further delineated in table 6.

Table 6

Educational Support*
Cumulative Percentages of Experimental
Program Districts below State Quartiles

School year ending	Q_1	Median	Q_3
1958	10	48	74
1959	15	36	73
1960	16	45	79
1961	16	33	59
1962	11	30	61
1963	8	29	56
1964	6	26	52
Average—all yrs.	12	35	65

*1958 - 1961 = Net Current Expenditures per WADA
1962 - 1964 = Approved Operating Expenditures per WADA

The percentages in table 6 as compared with quartile expectations indicate that the wealthier districts have been considerably more active than less well endowed districts in Experimental Program participation. Analysis of the quartile data on a longitudinal basis shows a downward trend in participation by poorer districts. Despite the 1961 legislative change which guaranteed 50 percent State aid to districts with State aid ratios below that level and the more recent practice of allowing 100 percent State aid on all research costs in multidistrict studies, Experimental Programs has become more and more an activity of the economically more able school district.

Taken together, the data on enrollments and school district wealth in tables 3 through 6 show clearly that State Aid for Experimental Programs is biased toward the larger and wealthier district. The small district with a low educational expenditure is the one least likely to take up the challenge and experiment with innovations to upgrade instruction. Of the two restricting factors, small enrollments and limited resources, the first has been the greater barrier to participation in Experimental Programs.

Geographic location. The third characteristic of importance in analyzing school district participation in Experimental Programs is geographic location. For this analysis the county is an appropriate unit of study. Over the seven-year period, 31 or 53 percent of the 58 county units[3] in New York State have been represented by one or more school districts in one or more Experimental Programs. Twenty-seven counties (47 percent of the total) with 261 districts or 32 percent of those operating in the State have had no representation whatsoever. Table 7, page 18, lists the 31 counties represented in Experimental Programs and shows the number of sponsoring districts in each and the total number of participations resulting from district activity in more than one project.

---

[3] New York City comprising five counties is treated as a single unit for this analysis.

Table 7

Experimental Programs
District Participation by Counties
1958 - 1965

County	Districts	District participations*	
		Number	Cumulative percentage
1. Nassau	28	42	18.5
2. Monroe	18	33	33.0
3. Westchester	16	22	42.7
4. Albany	5	16	49.8
5. Erie	14	15	56.4
6. Otsego	12	12	61.7
7. Suffolk	11	12	67.0
8. Delaware	11	11	71.8
9. Onondaga	4	7	74.9
10. New York City	1	6	77.5
11. Rockland	5	6	80.2
12. Saratoga	5	5	82.4
13. Schenectady	2	5	84.6
14. Tompkins	5	5	86.8
15. Broome	3	3	88.1
16. Chenango	3	3	89.4
17. Dutchess	3	3	90.7
18. Oneida	2	3	92.1
19. Seneca	3	3	93.4
20. Herkimer	2	2	94.3
21. Orange	2	2	95.2
22. Rensselaer	2	2	96.0
23. Cattaraugus	1	1	96.5
24. Cayuga	1	1	96.9
25. Chautauqua	1	1	97.4
26. Cortland	1	1	97.8
27. Fulton	1	1	98.2
28. Niagara	1	1	98.7
29. Ontario	1	1	99.1
30. Washington	1	1	99.6
31. Wayne	1	1	100.0
Total	166	227	100.0

*Sponsorship of single-district project or cooperation in multidistrict study.

The cumulative percentages in table 7 highlight the geographic localization of Experimental Programs. Four counties account for just under 50 percent of the total district participation. Seventy-eight percent of the participations have been concentrated in 10 counties. The balance of the activity, 22 percent, has been spread out over 21 counties.

The multiple participations of a number of districts contribute significantly to the localization of Experimental Programs. As shown in table 8, the number of projects per district ranges from 1 to 7.

Table 8

Experimental Programs
District Participation
1958 - 1965*

Projects per district	Districts	Total participations
7	1	7
6	1	6
5	1	5
4	4	16
3	8	24
2	18	36
1	133	133
	166	227

*Districts in more than one project identified by name in appendix B.

The 33 districts which have participated in two or more projects account for 94 (41 percent) of the 227 district participations. The willingness of school districts to become involved in experimentation two, three, and more times attests to the value of Experimental Programs.

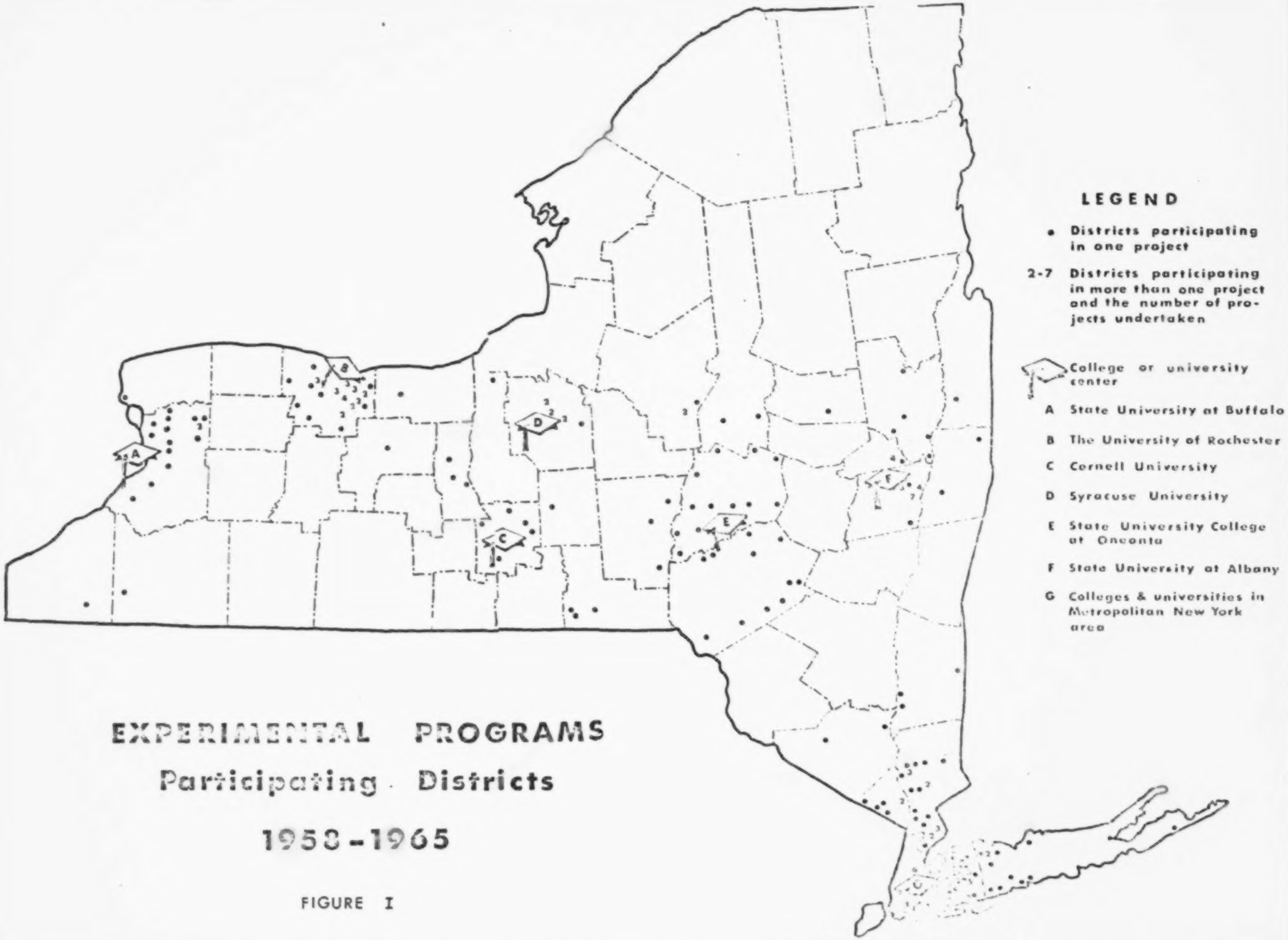
The pronounced localization of Experimental Programs in a few counties is related to the predisposing factors of school district size and wealth. The most active counties are noted for a preponderance of school systems with above-average enrollments and expenditures. However, experience with the program suggests another influencing factor: the proximity of school districts to major college or university centers.

As an influencing factor, proximity has two facets. On the one hand, specialists in research and education are readily available to assist in the design and development of an experiment initiated by a local school district. On the other, college or university staff members can take the lead in getting an experiment under way. A number of Experimental Programs have, in fact, originated on the college campus. University and college faculty members interested in pursuing research on innovations in instruction have sought the cooperation of neighboring school districts who by serving as sponsors of the projects made them eligible for State aid.

The proximity of Experimental Program districts to institutions of higher learning is demonstrated in figure 1. This map shows the location by county of the 166 Experimental Program districts, indicates the number of times each district has participated, and identifies seven university centers.

Summary

In summary, the foregoing analysis suggests that in terms of the first criterion, school district participation, State aid for Experimental Programs


LEGEND
● Districts participating in one project
2-7 Districts participating in more than one project and the number of projects undertaken
College or university center
A State University at Buffalo
B The University of Rochester
C Cornell University
D Syracuse University
E State University College at Oneonta
F State University at Albany
G Colleges & universities in Metropolitan New York area
A
B
C
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F

EXPERIMENTAL PROGRAMS
Participating Districts
1958-1965

FIGURE I

must be rated as a program of qualified success. On the positive side is the growth over the seven years of operation in numbers of districts, teachers, and pupils involved. This growth has been considerable, and it is disproportionately greater than the 1961 increase in funds for the program.

The qualifying consideration is the failure of the program to engage a representative sample of New York State School districts in experimentation. The benefits of innovation and evaluation under State Aid for Experimental Programs have been limited to communities close to colleges, the wealthier districts, and, very emphatically, to school systems with large enrollments.

Emergence of New Ideas

The second criterion for evaluating State Aid for Experimental Programs is the emergence of new ideas. Less objective data are available for this analysis, and considerably more subjective evaluations must be made. There is the additional problem of defining new ideas. As Kowitz wrote,

> "The identification of truly new ideas is always difficult. One of the favorite games in education is to show that an idea presented as a new one strongly resembles practices which were common a number of years ago. Thus, the idea of teacher aides resembles the Lancaster system of the early 1800's, the idea of the ungraded primary unit has many elements of the one-room school, and programmed materials for automated teaching devices often resemble the workbooks of yesteryear."[4]

No innovation of the magnitude and popularity of team teaching, the nongraded school, i/t/a (the initial teaching alphabet), or programmed instruction has had its origin in an Experimental Program. However, these and almost all the other major innovations of the last decade have been adopted and evaluated under one or more of the 74 State-aided projects. Novelty has been manifested in the manner in which known innovations have been implemented. For example, one project employs team teaching across grade levels for the express purpose of developing creativity in scientific reasoning. Another project is studying the effect of independent study at the secondary level on college success. A group of projects has developed unique methods for the identification and prediction of gifted, creative, underachieving, and overachieving students.

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[4] Kowitz and Salter, *op. cit.*, p. 21.

Another aspect of innovation is the production of materials. Over the years, voluminous amounts of material of varying quality have been produced. This production has been an integral part of either the instructional or research activities of Experimental Programs. It has included curricular materials, programmed units, testing instruments, reporting and recording devices, and a wide range of audio-visuals. A number of the materials produced have been copyrighted.

It can be hypothesized that some of the creative elements of Experimental Programs are destined for acceptance as innovations in the future. Mort has written:

> "...not all important innovations spring fully armed from the brow of some Jove. Some of them are old strands in new patterns. ...During the slow early period of spread of an innovation, the innovation receives no recognition. Recent studies indicate that during this early period the innovation is seen piecemeal; no one sees the forest which comprises the trees. Its rapid spread follows recognition of the inclusive design. For example, according to the theory, some of the bits of adjustment we find in our schools today are limited but authentic adjustments to fundamental needs. They

> are now lost in the maze of ephemeral innovations and are seen, along with a myriad of other innovations, as ways of patching, splicing, adding accessories to or otherwise tinkering with the old mechanism to make it more tolerable"[5]

Considering this, the seven years of Experimental Program operation are insufficient to expect full-bloomed innovations or to predict which "seed ideas" will germinate.

An analysis of the distribution of the projects by topics provides some insight on the relative amount of activity in each area. Table 9 summarizes the yearly distribution of projects by topic and grade level.

Each year the greatest number of projects have been concerned with the improvement of instruction and services for the more able. However, over the years there has been a decrease in the proportion of projects devoted to this group. This has occurred as the number of topics for investigation and, therefore, the possibility of diversity has increased.

Most striking is the minimal number of projects evaluating new ideas in mathematics instruction. The last such study to be initiated, The Madison Project Method in Elementary School Mathematics, was supported by the State for one year, 1961-62. It was continued under the Cooperative Research Program of the U.S. Office of Education (CRP No. 1193), a program which does not require matching funds.

The lack of interest in research in mathematics instruction was substantiated by a 1961 survey of school district views on needed research. Mathematics

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[5] Paul R. Mort, "Studies in Educational Innovation from the Institute of Administrative Research: An Overview," in Matthew B. Miles (ed.), Innovation in Education (New York: Bureau of Publications, Teachers College, Columbia University, 1964), pp. 324-26.

Table 9

Experimental Programs by Topic and Grade Level
1958 - 1965

	School year						
	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65
Topic							
Science	6	5	5	7	3	4	4
Mathematics	2	2	1	2	-	-	-
More able students	10	14	11	14	10	6	6
English[1]	-	-	3	7	4	6	5
Foreign languages[1]	-	-	3	4	2	1	-
Social studies[2]	-	-	-	-	-	-	2
Culturally disadvantaged[2]	-	-	-	-	-	-	1
Total	18	21	23	34	19	17	18
Grade level							
Elementary	8	10	11	16	10	10	9
Secondary	10	11	12	18	9	7	9
Total	18	21	23	34	19	17	18

[1] First included 1960.

[2] First included 1964.

ranked 15th in frequency among 16 areas for investigation suggested by New York State school personnel.[6] Another survey, one concerned with curriculum changes in elementary science and mathematics, showed that in four out of five school years from 1958 to 1963, a greater percentage of districts introduced new curriculums in science than in mathematics.[7] Finally, the use of NDEA Title III funds in New York State evidences the lesser concern with mathematics. Three times as much of the Federal money has been spent for foreign languages as for mathematics; nine times as much has been spent for science as for mathematics. A study of mathematics as a potential area for innovation and research would prove interesting and is warranted by the data.

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[6] Lorne H. Woollatt and Theodore Bienenstok, Needed Research in the Field of Instruction. (Albany: The State Education Department, April 1961), p. 2.

[7] Bureau of Elementary Curriculum Development, Curriculum Change: Science and Mathematics in New York State Elementary Schools, a Survey, (Albany: The State Education Department, October 1963).

As shown in table 9, Experimental Programs have been about equally distributed between the elementary and secondary levels. This balance has been established by chance rather than design; there has never been any distinction between elementary and secondary level projects in the selection process.

Summary

While no unique innovation has come from Experimental Programs, the State-supported projects have introduced into the classroom almost all of the new approaches to instruction at the elementary and secondary levels, often with distinct variations and original materials. The ultimate significance of these novelties must await the test of time and replicated study.

The Ability of Local School Districts to Engage in Research

Underlying the institution of State Aid for Experimental Programs was the assumption that the public schools would be able to conduct research projects. Thus, the third criterion for the evaluation of the program concerns the ability of local school districts to engage in research. Indices of this ability are projects completed, project staffing, and staff continuity.

Projects Completed

One obvious measure of the ability of local school districts to engage in research is the percentage of projects started that were carried to completion.

At the end of the 1963-64 school year there were 56 Experimental Programs that had received State aid but were not longer active. Four of these had been absorbed into other projects. Of the remaining 52, 36 or 69.2 percent had operated to the satisfaction of the school districts and the State Education Department and had been brought to conclusion; 16 or 30.8 percent had not been completed. Four of those not completed had been discontinued by the sponsoring districts, while 10 had not been approved for continued support after one or more years of operation. The district reasons for discontinuations were lack of funds, loss of staff, or dissatisfaction with the projects themselves. Continuation requests have been rejected because the reviewers were not satisfied with the progress of the studies.

Project Staffing

Experimental studies are rigorous and demanding and have traditionally been considered the special forte of trained researchers in the laboratory. Even quasi-experimental activities in a field setting require the exercise of skills in research design, psychometrics, and statistics. A second measure of school district ability to engage in experimentation is the extent to which it has been possible for regular staff members to handle the special tasks of research or, conversely, the extent to which the school districts have had to rely on outside consultants in the staffing of their projects.

In the first two years of the program, 62 percent of the projects were staffed entirely by school district personnel; only 38 percent employed outside research cousultants. However, this ratio was not indicative of school district competency. A 1959 commentary on Experimental Programs included the following statements:

> "The schools are not staffed to meet the requirements of controlled experimentation in learning and teaching. This is no reflection on the schools. For the most part, the staffs of public schools have been trained

> for teaching, supervision, administration. Some individuals have had training in research, but were employed for other duties and could not be replaced. Often additional research assistance was needed for which funds were not available. In some cases, there was apparently no person readily available for consulting services."[8]

While Morrison foresaw that ultimately many schools would employ their own qualified research staff, his recommendation was that, to meet the immediate need, college and university faculty members be encouraged to serve the school districts as consultants.[9] For the last five years, the districts have relied heavily on outside consultants. In 1960-61, seven out of nine or 78 percent of the new projects were served by one or more such persons. This year, 1964-65, all eight new projects have outside consultants.

When school districts have conducted Experimental Programs without resort to the colleges and universities, the research activity has usually been handled by a school psychologist, an administrator, a department chairman, or, in large districts, the person responsible for research and statistics. It is interesting to note that four of the large city districts with staff specialists in research (Albany, Rochester, Schenectady, and New York City) have employed consultants from colleges and universities for one or more experiments.

Staff Continuity

Various factors in school research such as the complexities of instructional problems, the cumulative effects of minor differences over a period of time, the necessity for preparation, planning, and pilot work, and the need to eliminate the Hawthorne effect of first-year experience with an innovation dictate that experimental programs shall persist for a number of years. In addition, as in the case of most endeavors, the success of a program depends upon the interest and ego involvement as well as the competencies of the project personnel. Staff continuity thus becomes essential to the viability and validity of a research investigation and is the third criterion for testing the ability of local school districts to engage in research.

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[8] J. Cayce Morrison, "Experimental Programs: A Memorandum for Planning." (Albany: The State Education Department, July 24, 1959), p. 6.

[9] *Ibid*.

A review of the staffing of the 36 completed projects shows that in 6 cases there was a change in the Principal Investigator and in 4 other cases there was a change in the Research Consultant. The review also shows that while the studies were eventually concluded, there were numerous problems and delays because of the changes in key personnel.

Summary

As demonstrated above, the experience with Experimental Programs does not fully support the initial contention that the public schools in themselves are able to conduct research projects. While nearly 70 percent of the projects no longer active were completed, 30 percent--3 out of every 10--were not brought to conclusion. The districts rely extensively on outside consultants for research services. There has been a considerable amount of turnover among project personnel.

Dissemination of Findings

The fourth criterion for the evaluation of State Aid for Experimental Programs concerns the dissemination of findings.

From the outset, Experimental Programs was conceived as having the broadest potential for inducing change on the basis of research results. In a preliminary discussion of the criteria for judging applications, it was stated that to be worthy of State financial assistance, an idea should have a capacity for transferability. In other words, it should be of such a nature that if experiment showed it produced desirable results, it would be appropriate for use in a school system other than the one where it was being tried.[10] Examining the extent to which findings have been disseminated will permit some evaluation of the effectiveness of the program in promoting transfer.

Dissemination to encourage adoption of new instructional approaches may function at several levels. One level involves providing information, either passively, upon request, or actively, by volunteering reports. A second level involves supporting the demonstration of a new approach proven superior by research. A third level, incorporating elements of both the informational and demonstrational levels, would transmit findings and practices through the training of school staff. Still another level would involve spreading practices directly through legislative mandates, and a fifth would spread them indirectly by funding special programs incorporating innovations.

To date, Experimental Program dissemination has operated at the informational level only. The channels through which information has been transmitted are responses to letters of inquiry, newspaper articles, conference presentations, and publications.

The requests for information on individual projects and the program as a whole have been innumerable. It has been the practice to refer inquiries on individual projects to the Principal Investigators with the expectation that they in turn would provide the desired information or reports. Because of this procedure, no data are available on how many requests were satisfied.

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[10] Memorandum from Donald Ross, Assistant Commissioner for Research, to Warren Knox, Assistant Commissioner for Instructional Services (General Education), January 23, 1958.

Newspaper articles on Experimental Programs have given local publicity to new and ongoing studies. However, few of these popular releases ever deal with the evaluative aspects of the programs. Apparently both the nature of evaluation and the time required dull the enthusiasm associated with novelty.

Conferences at which reports on Experimental Programs have been given in the past seven years include the annual conventions of the American Educational Research Association, the Educational Research Association of New York State, the American Psychological Association, and the New York State Association for Supervision and Curriculum Development; meetings of the various state organizations for school administrators; and statewide and regional programs of the New York State Teachers Association. The programs have also been discussed for school district gatherings and PTA groups. Again there is no definitive count of the number of conference presentations. A partial listing of convention reports is given in appendix C.

Publications on Experimental Programs are of two types, those released by the State Education Department and those appearing in professional journals. Again, as the principal investigators and research consultants for the projects may exercise the initiative in publication and do not always report their activity, there is no definitive list of journal articles. A review of the literature has identified 14 items on State-aided projects. Both Department and journal publications are listed in appendix D.

Summary

Experimental Programs have been publicized through journal articles, conference presentations, newspaper items, and responses to individual inquiries.

However, there has been no standardized procedure for reporting findings per se and making them available to the schools. The possibilities of dissemination through demonstration, teacher training, legislative mandate, and special funding have yet to be explored.

CHAPTER IV

RECOMMENDATIONS

The past seven years of Experimental Program operation and the current evaluation lead to a number of recommendations. These recommendations are of two types, those pertaining to the administration of the program as a Departmental operation and those directed to the improvement of the experimental programs undertaken in the schools.

Administration of the Program

Extending the Reach of Experimental Programs

The analysis of school district participation in Experimental Programs showed that it is larger and wealthier districts, concentrated in a few areas of the state, that have participated most extensively in State-supported research activities. Children enrolled in the smaller and poorer school districts and those in outlying areas of the State have had only a meager representation in the projects. But State Aid for Experimental Programs was intended to benefit children throughout the State regardless of the size, wealth, or geographic location of their school districts. Moreover, it is the smaller, less wealthy districts, isolated from the large collegiate centers, that perhaps most need and can profit most from innovation and experimentation. It is therefore recommended that the Department take steps to insure the participation of such districts in the program.

As it is unlikely that the districts in question will themselves initiate proposals, the Department should assume an active leadership role, identifying districts, ascertaining their common problems, devising a research proposal evaluating an innovative approach to a common problem, and then giving the districts all possible financial encouragement to enter into a study. The existing procedures for initiating multidistrict studies offer a pattern for this activity. The current practice of handling 100 percent of the research costs for a multidistrict study might serve as a guide in encouraging participation.

Consideration might also be given to the utilization of smaller colleges and universities in extending the reach of Experimental Programs. Such institutions, located in those areas of the State where Experimental Programs have not operated, might be designated as agents of the Department for the recruitment of smaller, less wealthy districts into research projects.

Encouraging Multidistrict Studies

As has been demonstrated, the encouragement of multidistrict studies has broadened participation in Experimental Programs, bringing into the projects more districts and greater numbers of pupils and teachers. At the same time, the quality of the research has improved with multidistrict studies while, with shared services, the cost per district has declined. It is therefore recommended that the encouragement of multidistrict studies be continued and that the current proportion of such projects, fifty percent of the total number approved, be maintained as a minimum.

One change in the current procedure for initiating multidistrict studies appears desirable. The districts should be given more of a part in the development of the research design. In the formulation of the initial proposal, each school system should be represented by a staff member trained in research and by the person who will be responsible for the operation of the innovation. Commitment to a study will be enhanced if it has evolved with the cooperation of those individuals who will be closest to its implementation and supervision in the schools.

Expanding Areas of Investigation

With the legislative changes that have occurred over the years, there has been considerable liberalization in terms of the topics or areas for investigation under Experimental Programs. Opening up the aid program to any good idea should result in studies of higher quality. It is therefore recommended that the Commissioner's discretionary power for the identification of new subjects and categories of pupils for Experimental Programs be judiciously exercised to the end that the program will best serve its goal of improving instruction.

Studying the Teacher

As a corollary to the suggestion for expanding the areas of investigation, it is recommended that attention be directed to the greatest, untapped resource for instructional improvement--the classroom teacher. Through his direct and sustained contact with the individual child, the teacher is the most decisive agent for behavioral change. All methodological, mechanical, curricular, and organizational changes administered by the teacher are intrinsically tied to his competencies. Therefore, State Aid for Experimental Programs should be used to encourage studies of practices and experiences determining teacher behavior. These would include the preservice education, field experience, and in-service training of the teacher.

The most promising technique for the definition of problems for study in this area is the systematic observation by a free agent of the ongoing instructional process and the dynamic interactions in the classroom.

Locating Alternate Sources of Support

With the funds for Experimental Programs restricted by legislative appropriation as they have been and no limitation on the topics for investigation, it is inevitable that not all promising studies can be supported with State aid. It is also inevitable, as experience has shown, that some potentially valuable projects will not meet the criteria for approval as State-aided research. At the same time, there are numerous possibilities for the support of research and innovative activities through the U.S. Office of Education, other governmental funding agencies, and the philanthropic foundations. It is recommended that to make the fullest possible contribution to the improvement of instruction, the Department establish procedures for assisting the school districts in locating these alternate sources of support. The heretofore informal practice of directing applicants to other assistance funds should be made a formal part of the review process for Experimental Programs.

Disseminating Findings

To date there has been no systematic plan for the dissemination of the findings of Experimental Programs. To fully realize the goals of Experimental Programs, the entire process of providing feedback to the schools demands serious attention. It is recommended that the dissemination of findings be made a major function in the administration of the program and that the activity be attacked in several ways.

First, there is a backlog of reports resulting from the 36 completed projects which should be made available to the schools in some form. It is suggested that the Department prepare for distribution a series of monographs summarizing the projects on a given topic (e.g., Elementary Programs for the

Gifted, Secondary Programs for the Gifted, Foreign Language Instruction), and relating the findings to those of other research studies.

Second, in the future, project budgets should include funds for the production of both technical and popular reports. At the same time, administrative monies should be allocated for the duplication and distribution of one or both kinds of reports by the Department when in its judgment the findings of a study merit it.

The need for popular as well as technical reports is clear. Technical research reports are essential for the evaluation of an innovation,but such documents are not conducive to change in the schools. Experimental design, testing, statistical inferences, and the analysis of findings are of little concern and comprehension to teaching personnel. In contrast, the popular report will speak directly to the practitioner, covering in detail the innovation studied, the necessary inservice teacher training, the curriculum used, and the mechanics of implementing the program as well as the problems confronted.

Even well developed popular reports are not in themselves significant agents for change. They merely call attention to promising practices. When the State Education Department is convinced by the findings of an Experimental Program that a given innovation has merit and value, it should disseminate its belief with a vigorous effort. The Department should encourage educational centers to demonstrate the favored practice in a school setting, to train staff in the use of the new approach, and to send personnel into the field to assist interested school districts in instituting the new program. The Department should further stimulate the diffusion by giving preference to programs concerned with the new instructional practice when evaluating applications for State support of locally originated inservice training projects submitted to the Bureau of Teacher Education.

The Department's obligation to disseminate the findings of Experimental Programs will not be fulfilled when it has heralded successful innovations. With the current emphasis on change and its potential for improvement, it is sometimes forgotten that all new ideas are not necessarily better ones. While it was once felt that schools were unduly slow in adopting changes, today many schools are overly receptive and too easily triggered to abandon the old and put on the new. The State Education Department must be equally vigorous in informing the schools when research findings show that an innovation represents only change and nothing more.

Improving Experimental Programs

The following recommendations for improving the quality of school district research derive from an analysis of the strengths and shortcoming of the projects conducted. A complete listing of the projects is given in appendix E.

Stating Behavioral Objectives

Current writings in education stress the need for operational definitions of the objectives of instruction, whether it be for the purpose of curriculum development, administrative planning, or program evaluation. Nowhere is this more important than in Experimental Programs. With proper attention to the definition of objectives, many of the difficulties encountered in past projects can be avoided. For example, if objectives are clearly stated, the necessity for selecting or devising new test instruments consonant with these objectives will be readily apparent. Evaluative priority will not be given to standardized achievement tests that are not concerned with the goals of the innovation.

As demonstrated by a number of the currently active Experimental Programs, the development of definitive statements on objectives can consume a major block of time in the initial stages of a project. Yet the activity is of such critical importance that all future plans for Experimental Programs should include provisions for the definition of behavioral objectives.

Defining Innovations

Equally as important as statements of behavioral objectives in experimentation are precise definitions of innovational treatments. The most frequent criticisms of Experimental Programs have cited the disparities between program descriptions and actual practices. There is need in applications and reports for clear-cut, detailed statements on the treatments proposed and put into operation. Definitive statements of what is meant by team teaching, independent study, the nongraded primary, large group instruction, teacher aides, and similar terms will insure clear understanding of what is required at the operational level. They will also make possible more valid comparisons of several studies presumably evaluating the same technique; they will eliminate the unwarranted lumping together of disparate practices sharing a common name.

Analyzing by Pupil Categories

Evolving from the early years of experience with Experimental Programs have come more sophisticated research designs making use of stochastic types of analyses. These involve breaking the whole group down into logical subgroups or classifications for comparisons.

Empirical findings have demonstrated that various categories of pupils do react in different ways to a given treatment. Testing hypotheses that ignore the real classifications in which children and their behaviors can be grouped is unwarranted. It is naive to assume, for example, that all children will or will not do better with programmed instruction. Future proposals for Experimental Programs should capitalize [illegible]

p[illegible] for [illegible]

Programs should capitalize upon previous experience and findings and include plans for subgroup analyses.

Controlling the Teacher Variable

One of the recurring conclusions of Experimental Programs is that a good teacher using an inferior method is more effective than a poor teacher using a method of demonstrated superiority. A number of studies have reported that even when there are clearly significant differences between treatments, some classes exposed to less efficient approaches exceed the mean performance of the superior treatment group. Likewise, classes using an approach shown to be better on an overall basis fall below the average achievement of those taught with a less efficient method. This program experience substantiates the view consistently voiced by educators that the caliber of the teacher is the decisive factor in the quality of education.

More of the variance in pupil achievement can be accounted for by teacher effectiveness than by any other treatment variable, be it the child, the school, or the curriculum. The importance of the teacher variable dictates that an experimental design provide for the control of this factor; the comparability of teacher effectiveness must be assured in order to infer that two treatments are or are not significantly different. The most scientific method of ensuring comparability is the random assignment of teachers to treatments; to employ this method, there should be approximately 15 teachers per treatment. A second method is the use of the rotation-group technique. Both of these approaches have proven very difficult to implement in field studies.

The teacher factor may also be controlled by giving both experimental and control teachers special training and stimulation through in-service programs, group meetings, and the like. Such activities are currently a part of a number of Experimental Programs.

An alternate way of controlling the teacher variable is to secure some estimate of teacher effectiveness. Efforts in this endeavor have been notoriously unsuccessful. However, a large-scale study currently underway in the State Education Department may provide a means for equating the group teacher variable in studies employing pupil achievement as the criterion. In the meantime, Experimental Programs should continue to provide special activities for experimental and control teachers. Future studies should persist in the collection and analysis of demographic teacher data in order to take account of any major discrepancies between treatment personnel. Research designs should continue to use subjective evaluations which report the equivalency of the teachers until more objective measures become available.

Strengthening the School District Research Staff

Consultants from colleges and universities have played a major role in Experimental Programs and have contributed greatly to the success of the State undertaking. It is recommended, however, that steps be taken to strengthen the school district research staff so that the overall design and direction of Experimental Programs can be placed in the hands of specialists in research who are close to the instructional setting. This is desirable for several reasons.

A major stimulus for innovation and research can be the problems encountered in the day-to-day operation of the schools. Moreover, when a research project evolves from local recognition of a problem there is an enthusiasm and commitment to the study which insures a greater degree of success than when the research activity is superimposed by an outside agent. The trained research worker functioning in the local school system will be at hand to help in the identification of problems and, reacting to an ongoing situation, he will be in an advantageous position to assist in the development and analysis of plans for their solution. Furthermore, the immediacy of his position will readily permit the large number of contacts and the close working relationships needed for the maintenance of enthusiasm and interest in a project. It will forestall some of the discontinuity and lack of communication which has at times hampered the conduct of Experimental Programs dependent on outside direction. Undoubtedly, the direction of a project by a member of the staff involved can present some difficulties; these will be minimized when there is a true research commitment by the school district as evidenced by the employment of a research specialist.

Another consideration motivates the recommendation for strengthening the school district research staff. The decade ahead will see the colleges and universities struggling to meet the instructional needs of expanding enrollments with quality personnel. Consequently, the public schools will find it increasingly difficult to secure the services of overburdened professors for three- and four-year research studies. In anticipation of this situation, steps must be taken to assure the availability of competent research workers within the local school district.

The benefits to be derived from the employment of research specialists by local school districts will not be limited to the conduct of Experimental Programs. Research is very much a part of the current educational scene. Many of the new funds being made available for education are earmarked for research or for programs requiring technical evaluations by trained researchers. The school district employing a specialist in research will be prepared to take advantage of these new opportunities and to participate in research projects other than Experimental Programs. It is therefore suggested and urged that every school district with an elementary and secondary enrollment of 2,500 pupils employ one trained person to serve as director of research on a full-time basis.

Both the State Education Department and the colleges and universities have a part to play in encouraging the creation of research positions in local school districts. The Education Department can do so by establishing a certificate for a Specialist in Education Research, the institutions by offering graduate level programs for the preparation of school research workers. The certificate and the graduate programs will recognize that the school researcher offers a special set of new skills for the improvement of education and will insure a minimum competency in those entering the field.

Conclusion

State Aid for Experimental Programs was initiated with the high expectation that, with some financial encouragement for the local school districts, experimentation and innovation would become an integral part of public school operations, rightfully recognized as important keys to quality education. Research projects have been pursued by a goodly number of school districts, and, over the seven years, Experimental Programs have been extended annually to greater numbers of districts, pupils, and teachers, but the full potential of these activities has yet to be realized. The experience of the past has led, however, to a number of recommendations for the future.

From the point of view of Departmental administration of Experimental Programs, steps should be taken to involve a more representative sample of districts, to maintain the number of multidistrict studies, and to expand the topics for investigation, giving special attention to the study of the teacher's role in instruction. Above all, a special effort must be made to disseminate the findings of those studies which have been completed and to establish a procedure whereby the results of other projects will be made known as they are available.

If the quality of the research undertaken is to improve, there must be definitive statements of both the objectives of the innovations being tested and the innovational procedures employed. Provision must be made for the control of the teacher variable, and research designs must be of sufficient sophistication to take account of categories and classifications of pupils within groups. Finally, the success of Experimental Programs and other research projects can best be assured by the school districts appointing as full-time staff members, specialists trained in education research.

APPENDIX A

CRITERIA FOR THE EVALUATION OF EXPERIMENTAL PROGRAMS*

The following criteria used in the evaluation of applications for State Aid for Experimental Programs should serve as guides for all school districts preparing proposals.

Significance

1. The proposal incorporates new content, methods, or services and facilities which have not yet been fully evaluated.
2. The idea being tested is appropriate for transfer to other school systems and could result in a substantial contribution to the field of education.

Adequacy of Research Design

1. The proposal reflects necessary knowledge of related research.
2. Questions to be answered or hypotheses to be tested are tightly reasoned and clearly stated with support in theory or empirical findings.
3. Procedures to be followed are presented in detail. Data to be gathered, sampling procedures to be followed, tests and other evaluative techniques to be used, and the nature of the statistical analysis are specified.
4. Experimental conditions and controls are appropriate for the proposed evaluation, and experimental treatments are sufficiently described.

Operational Promise

1. The school district making the proposal has adequate facilities for carrying it out.
2. The person in charge of the operation has a sound background in the field of study and can direct the work competently.
3. The program will enhance the knowledge and professional skills of the personnel involved.

Economic Efficiency

1. The program calls for specific expenditures over and above those a district would normally experience in its instructional program.
2. The anticipated expenditures are justified by the procedures to be followed.
3. There is a reasonable relationship between the value of the expected results and the total excess expenditures.

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*From application instructions for State Aid for Experimental Programs.

APPENDIX B

DISTRICTS PARTICIPATING IN TWO OR MORE EXPERIMENTAL PROGRAMS 1958 - 1965

Projects per district	Number of districts	Districts	Projects per district	Number of districts	Districts
7	1	Bethlehem	2	18	Bedford Clarence DeWitt East Meadow East Rochester East Williston Half Hollow Hills Liverpool Long Beach Mineola New Hartford Nyack Penfield Pittsford Rush-Henrietta Rye Neck Syracuse Wantagh
6	1	New York City[1]			
5	1	Plainedge			
4	4	Albany[2] Brighton Schenectady Sewanhaka			
3	8	Greece Guilderland East Irondequoit Harrison Plainview Rochester West Irondequoit Yorktown Heights			

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[1] Two of six projects sponsored by Hunter College High School under New York City board of Higher Education.

[2] Includes participation in multidistrict study by Milne High School, State University of New York at Albany.

APPENDIX C

CONVENTION PRESENTATIONS - EXPERIMENTAL PROGRAMS

Code number in parentheses following the citations indicate the Experimental Program or Programs discussed. All programs are listed by number in appendix E.

American Chemical Society--National Meeting

1965 "Testing for Memory, Comprehension, Application, and Other Intellectual Behaviors in High School Chemistry"
John J. Montean, University of Rochester (A-57-62)

American Educational Research Association--Annual Meeting

1962 "Three Years of Cooperative Research with Local School Districts"
Gerald T. Kowitz, New York State Education Department

"A Three Year Program of Acceleration for More Able Pupils"
Richard M. Clark and Reuben R. Rusch, State University College at Oneonta (A-6-58)

"Measuring Short-Term Growth in School Achievement"
Conwell Higgins, Albany Public Schools (A-1-58)

"Measuring Physical, Intellectual and Social Emotional Development"
Roscoe C. Brown, Jr., New York University (A-48-61)

"A Controlled Experiment to Determine Whether a Group of Pupils Who Are Intellectually, Physically and Socially Able Can Be Accelerated Successfully by the Utilization of an Eleven-Month School Year"
Raymond H. Ostrander, Boston University (A-6-58)

1963 "Programmed Instruction and the Gifted Child"
Lassar G. Gotkin, Center for Programmed Instruction, and Nicholas Massa, Farmingdale Public Schools (A-45-61)

"The Use of a Developmental Index to Predict Pupil Achievement"
Roscoe C. Brown, Jr., New York University (A-48-61)

1964 "Research to Improve Instruction: An Experience in Experimentation"
Gerald T. Kowitz, University of Houston, and Henry Hausdorff, University of Pittsburgh

"The Relationship of Changes on Certain Developmental Factors to Pupil Achievement"
Roscoe C. Brown, Jr., and Edward H. Henderson, New York University (A-48-61)

1964 "An Exploratory Study of Tenth Grade Achievement"
(Con.) Henry Hausdorff, University of Pittsburgh, and Gerald T. Kowitz, University of Houston (A-68-62)

"Evaluation of a Study-Skills Program for Above-Average High School Pupils"
Jason Millman and Marvin D. Glock, Cornell University, and Maxwell E. Space, Binghamton Public Schools (A-34-60)

1965 "Longitudinal Analysis of Pupil Progress in a Public School"
Roscoe C. Brown, Jr., New York University (A-48-61)

"Problems of Criterion Measures Encountered in Designing a Program for Measuring the Effectiveness of Programmed Learning"
William C. Rock, Rochester Public Schools (A-70-63)

"Longitudinal Analysis of Short-Term Gains in Achievement Test Results"
Conwell Higgins, Albany Public Schools, and Reuben R. Rusch, State University of New York at Albany (A-1-58, A-42-61)

"Patterns of Academic Development"
Gerald T. Kowitz, University of Houston (A-63-62)

American Psychological Association--Annual Convention

1960 "The Use of the Iowa Basic Skills Tests in Longitudinal Study of Academically Talented Children in Grades 3-6"
Conwell Higgins, Albany Public Schools (A-1-58)

1962 "Seven Predictor Items (SB Form LM) of Academic Talent for Grade Three Children"
Conwell Higgins, Albany Public Schools (A-1-58)

1963 "The Individual's Academic and Intellectual Growth Patterns and Its Prediction over Many Points in Time"
Charles M. Armstrong, New York State Education Department (A-63-62)

Association for Research in Growth Relationships--Annual Meeting

1960 "A Progress Report on a Longitudinal Study of the Effects of Acceleration Combined with a Summer Session Program on More Able Public School Pupils"
Richard M. Clark and Reuben R. Rusch, State University College at Oneonta (A-6-58)

Educational Research Association of New York State--Annual Research Convocation sponsored with the New York State Education Department

1961 "Identification of Academically Talented Third Grade Pupils"
Conwell Higgins, Albany Public Schools (A-1-58)

1962 "What Can be Done for the Academically Talented in Smaller Schools?, A Report of the Wide Horizons Program"
Kenneth F. Harris, BOCES #1, Monroe County (A-16-58)

"Madison Project of Mathematics Grade 8"
William F. Bowin, Syracuse Public Schools (A-33-60)

1963 "Using Longitudinal Pupil Records for Evaluation of School Processes"
Charles M. Armstrong, New York State Education Department (A-63-62)

"Selection for High School Chemistry"
Stephen S. Winter, State University of New York at Buffalo (A-57-62)

"Results of a Five-Year Program of Sequenced English Language Instruction in Primary Grades"
Doris Flinton, Bethlehem Central Schools (A-3-58 ; A-56-61)

"Value of Reading Instruction to Selected Kindergartners"
Florence Heisler, Brooklyn College (A-58-62)

"The Identification and Diagnosis of Gifted Underachieving Third Grade Children"
Edward Delaney, Bay Shore Public Schools (A-27-59)

"Bright Underachievers--Grades 4-10"
Helen Rice, West Irondequoit Central School (A-55-61)

"The Principal Components of Written English Expression"
Benjamin Rosner, Brooklyn College (A-59-62)

"Comparisons of Lay Reader and Teacher Ability and Judgments"
Miriam Bryan, Educational Testing Service (A-59-62)

"Explicit and Implicit Instructional Objectives in English Composition"
Julian Roberts, Yeshiva University (A-59-62)

"Informational Determinants of Reader's Judgments of the Quality of Written Expression"
Mildred Kaye, Brooklyn College (A-59-62)

"Children's Thinking in Science-Related Conceptual Areas: A Study of Children's Cognitions Regarding Volume and Constancy of Size"
Betty McKnight, Tompkins-Seneca BOCES; Richard E. Ripple, Jason Millman, and Oscar G. Mink, Cornell University (A-53-61)

1964 "Large-Group Instruction in Chemistry Project"
John D. Scheller, Amherst Central High School District; Stephen Winter, State University of New York at Buffalo; John Montean and John Schmitt, University of Rochester (A-57-62)

1964 (Con.) "Student and Teacher Characteristics Associated with Pupil Gains in Composition Skill"
Mildren Kaye, Brooklyn College (A-59-62)

"Review of Research on Lay Reader Programs"
Paul Diederich, Educational Testing Service (A-59-62)

"Frequency of Composition Assignments"
Julian Roberts, Yeshiva University (A-59-62)

"A Report on an Exploration in Three Instructional Methods in Grade 5-6-7"
William C. Rock, Rochester Public Schools (A-70-63)

"A Developmental Index for Describing Child Development"
Roscoe C. Brown, Jr., and Edward H. Henderson, New York University (A-48-61)

"Programmed Instruction: Some Issues"
Fred Guggenheim, New York City Board of Education (A-60-62)

National Council on Measurement in Education

1963 "Selection of Academically Talented Children in Grade 3 with Multiple Predictor Score Cut-Offs versus Multiple-Regression Calculated Score Cut-offs"
Conwell Higgins, Albany Public Schools (A-1-58)

New York State Association for Supervision and Curriculum Development

1959 "A New Design for Thinking in Beginning Reading"
Doris H. Flinton, Bethlehem Central Schools (A-3-58)

1960 "Educational Experimentation in the 1960's"
Lorne H. Woollatt, New York State Education Department

1964 "Program Learning and Creativity for Gifted Children"
Nicholas Massa, Farmingdale Public Schools (A-45-61)

"Improving the Achievement of Bright Underachievers (Elementary)"
Byron B. Williams, University of Rochester (A-55-61)

"Elementary Science Activities - Mental Age Placement"
Betty McKnight, Tompkins-Seneca BOCES (A-53-61)

New York State Congress of Parents and Teachers--Annual Institute for Parent Teacher Leaders sponsored with the School of Education, Cornell University

1964 "Improving the Achievement of Bright Underachievers"
Helen Rice, West Irondequoit Central School (A-55-61)

"The Non-Graded Program in the Elementary School"
Ruth Salter, New York State Education Department (A-73-63)

APPENDIX D

PUBLICATIONS ON EXPERIMENTAL PROGRAMS

Code numbers in parentheses following the citations indicate the Experimental Program or Programs discussed. All projects are listed by number in appendix E.

Department Publications

Division of Research. Experimental Programs in New York State Public Schools, 1962-63. April 1963.

Kowitz, Gerald T. Research for Educational Improvement. December 1960.

Salter, Ruth. State-Aided Experimental Programs 1963-64. March 1964.

__________, and Gerald T. Kowitz. Experimental Programs in the Public Schools, A Report on Research Projects Supported by the New York State Education Department. December 1961.

"State Aid for Local Experiments," Bulletin to the Schools, 48:18-19, September 1961.

Tilroe, Dexter. "Schools Encouraged to Experiment," Bulletin to the Schools, 45:24-25, September 1958.

Wollatt, Lorne H., and Theodore Bienenstok. Needed Research in the Field of Instruction Proposed by New York State School Systems. April 1961.

Journal Articles

Brown, Roscoe C., Jr., and Edward H. Henderson. "The Use of a Developmental Index to Predict Pupil Achievement," ARGR Journal, 5:29-42, April 1964. (A-48-61)

Clark, Richard M., and Reuben R. Rusch. "A Three Year Program of Acceleration for More Able Pupils," ARGR Journal, 3:45-53, April 1962. (A-6-58)

Cornell, Francis G., and Francis J. Lodato. "An Independent Honors Program for the Academically Talented," Journal of Educational Research, 58:200-04, January 1964. (A-43-61)

Davis, Olive B. "An Integrated Arts Program for the Gifted," Educational Theatre Journal, 15:327-31, December 1963. (A-22-59)

Di Lorenzo, Louis T., and Ruth Salter. "Cooperative Research on the Nongraded Primary," The Elementary School Journal, 65:269-77, February 1965. (A-73-63)

Gardiner, John S. "Working Programs for Meeting the Needs of Gifted Children," New York State Education, 46:199-200, December 1958.

Glock, Marvin, and Jason Millman. "Evaluation of a Study Skills Program for Above-Average High School Pupils," Journal of Developmental Reading, 7:283-89, Summer 1964. (A-34-60)

Higgins, Conwell. "Measuring Short-Term Growth in School Achievement," ARGR Journal, 3:21-25, April 1962. (A-1-58, A-42-61)

_______________. "The Use of the Iowa Basic Skills Tests in Longitudinal Study of Academically Talented Children in Grades 3-6," ARGR Journal, 1:17-21, November 1959. (A-1-58)

Kowitz, Gerald T., and Henry Hausdorff. "Research to Improve Instruction: An Experience in Experimentation," Phi Delta Kappan, 45:464-66, June 1964.

Rusch, Reuben R., and Richard M. Clark. "Four Years in Three: An Evaluation," The Elementary School Journal, 63:281-85, February 1963. (A-6-58)

Sheehan, Mary A. "Better Education for Gifted Youth," New York State Education, 46:287-89, January 1959. (A-16-58)

"Thirteen Experimental Projects Underway," New York State Education, 46:109, November 1958.

Van Hoff, Howard S., and Jonah D. Margolis. "Buffalo School System Launches 5-Year Program for the Gifted," New York State Education, 46:636-38, 686, June 1959. (A-14-58)

APPENDIX E

EXPERIMENTAL PROGRAMS
1958-- 1965

The following listings, "Projects Supported" and "Projects Currently in Operation," cover the 74 approved Experimental Programs which have functioned since the inception of the State aid program.

Each project is identified by a code (e.g., A-1-58) in which the second, two-digit number indicates the year the program was first approved for support. "P.I." is used to designate the Principal Investigator, the person responsible for the direction of the project; "R.C." denotes the Research Consultant.

In the data on projects no longer active, the letter or letters following the duration of a study indicate its ultimate disposition: C - Completed; D - Discontinued by the sponsor; CNA - Continuation request not approved; A - Absorbed in another project. Years refer to school years, (e.g., 1958-59, 1959-60). The total expenditure includes State aid and the contributions of the local school district or districts.

PROJECTS SUPPORTED 1958 - 1964

A-1-58 Identification and Education of the Academically Talented

Sponsor: Albany

P.I. - Dr. Conwell Higgins, Director of Research & Psychological Services
R.C. - Dr. Reuben Rusch, State University College of Education at Oneonta

Duration: 3 years C   Total Expenditure: $65,411

A-3-58 Audio-Visual Methods for Teaching Primary Reading

Sponsor: Bethlehem

P.I. - Mrs. Doris Flinton, Elementary Reading Consultant,
R.C. - Dr. Mauritz Johnson, Cornell University
Dr. Morris Eson, State University College of Education at Albany

Duration: 3 years C   Total Expenditure: $11,374

A-4-58 Science Education for Gifted Junior High School Pupils

Sponsor: Garden City

P.I. - Dr. Robert E. Lamitie, Assistant to the Superintendent
R.C. - Dr. Frederic L. Matthews, STACO, Inc.

Duration: 4 years C   Total Expenditure: $2,881

A-5-58 Honors Seminar in Mathematics for High School Students

Sponsor: Hunter College High School, New York City

P.I. - Miss Dorothy Geddes, Mathematics Teacher, Hunter College High School

Duration: 1 year D Total Expenditure: $585

A-6-58 Three-Year Program of Group Acceleration for More Able Pupils

Sponsor: Mineola

P.I. - Mr. Wiley C. Bowyer, Administrative Assistant
R.C. - Dr. Reuben Rusch and Dr. Richard M. Clark, State University College of Education at Oneonta

Duration: 4 years C Total Expenditure: $10,563

A-7-58 Advanced Science Study for High School Students

Sponsor: Norwich

P.I. - Mr. Albert S. Brown, Superintendent

Duration: 1 year CNA Total Expenditure: $1,365

A-8-58 Identifying Underachievers and Improving Their Effectiveness

Sponsor: Nyack

P.I. - Mr. Kenneth R. MacCalman, Superintendent

Duration: 2 years D Total Expenditure: $3,909

A-9-58 Special Programs for Elementary Pupils of Superior Ability

Sponsor: Randolph

P.I. - Mr. Gail N. Chapman, Elementary Supervisor

Duration: 1 year CNA Total Expenditure: $8,447

A-10-58 Chemistry Laboratory Experiences for the Academically Talented

Sponsor: Schenectady

P.I. - Mr. J. Reilly Osborne, Assistant Superintendent

Duration: 2 years C Total Expenditure: $24,638

A-12-58 Integration of Math and Science at the Eighth-Grade Level

Sponsor: Burnt Hills-Ballston

P.I. - Mr. Robert B. Kilburn and Mr. Donald R. Peterson, Science Teachers

Duration: 1 year C Total Expenditure: $507

A-13-58 Advanced Mathematics for Grade Eleven

Sponsor: Sewanhaka

P.I. - Mr. Alfred T. Anderson, Mathematics Teacher

Duration: 2 years C Total Expenditure: $13,405

A-14-58 Special Programs for Pupils of Superior Ability

Sponsor: Buffalo

P.I. - Dr. Gerald B. Leighbody, Deputy Superintendent
R.C. - Dr. Dwight E. Beecher, Associate Superintendent

Duration: 3 years C Total Expenditure: $207,404

A-15-58 Achievement and Adjustment of Accelerates in the Seventh Grade

Sponsor: Plainedge

P.I. - Mr. Nicholas Massa, Director of Exceptional Services

Duration: 1 year C Total Expenditure: $7,743

A-16-58 Enrichment Programs for Above-Average Secondary Students

Sponsors: Monroe County BOCES #1 and #2 - Brockport, Churchville-Chili, East Irondequoit, East Rochester, Fairport, Gates-Chili, Greece, Hilton, Honeyoe Falls, Penfield, Pittsford, Rush-Henrietta, Spencerport, Webster, Wheatland-Chili

P.I. - Mr. Kenneth F. Harris, Coordinator, BOCES # 1
Mr. Richard Santay, Assistant Superintendent, BOCES #2
R.C. - Dr. Clarence Williams, University of Rochester

Duration: 3 years C Total Expenditure: $38,345

A-17-58 Enrichment for Heterogeneously Grouped Elementary School Pupils

Sponsor: Snyder

P.I. - Mr. Crede D. Hagerty, District Principal

Duration: 2 years D Total Expenditure: $9,865

A-18-58 Mathematical Applications in Science

Sponsor: Carle Place

P.I. - Mr. William A. Bacci, Administrative Assistant
R.C. - Dr. Donald J. Malcolm, Educational Testing Service

Duration: 4 years C Total Expenditure: $34,772

A-19-58 Evaluation of Elementary School Enrichment Center Program

Sponsor: Wantagh

P.I. - Mrs. Ruth B. Hoffman, Coordinator for Special Education
R.C. - Mrs. Pamela J. Sweeney, Research Psychologist

Duration: 4 years C Total Expenditure: $42,928

A-21-58 An Experimental Approach in Seventh Grade Science

Sponsor: Jamesville-DeWitt

P.I. - Mr. Olcott Gardner, Science Instructor

Duration: 2 years D Total Expenditure: $418

A-22-59 An Integrated Arts Program for the Gifted

Sponsor: Hunter College High School, New York City

P.I. - Mrs. Olive B. Davis, Chairman, Department of Speech, Hunter College High School
R.C. - Dr. Frederick B. Davis and Dr. Leanne G. Rivlin, Hunter College

Duration: 3 years C Total Expenditure: $47,737

A-24-59 Impact of Elementary Foreign Language Study on Secondary Programs

Sponsor: Brighton

P.I. - Miss Alice L. Foley, Director of Instruction
R.C. - Dr. Clarence Williams, University of Rochester

Duration: 3 years C Total Expenditure: $4,850

A-25-59 Foreign Language Laboratories in Secondary Schools

Sponsor: New York City

P.I. - Mrs. Sarah W. Lorge, Language Consultant, Bureau of Audio-Visual Instruction
R.C. - Dr. Elizabeth Hagen, Teachers College, Columbia University

Duration: 3 years C Total Expenditure: $125,856

A-26-59 Summer High School Instruction in Five-Week Sessions

Sponsor: Sewanhaka

P.I. - Mr. Robert L. Springer, Principal of the District

Duration: 1 year CNA Total Expenditure: $1,967

A-27-59 Motivating the Gifted Child

Sponsor: Bay Shore

P.I. - Mr. Edward Delaney, Director of Elementary Curriculum
R.C. - Mr. Edward Gooler, School Psychologist

Duration: 3 years C Total Expenditure: $54,234

A-29-59 Subject Specialists for the Gifted in the Elementary School

Sponsor: New York City

P.I. - Dr. Philip E. Kraus, Director, The Gifted Child Project
R.C. - Dr. J. Wayne Wrightstone, Director, Bureau of Educational Research

Duration: 3 years C   Total Expenditure: $145,753

A-31-59 The Development of Critical and Creative Thinking

Sponsor: Clarence

P.I. - Dr. Stuart M. Losen, School Psychologist

Duration: 1 year C   Total Expenditure: $3,891

A-32-59 Elementary Science Taught By Closed-Circuit Television

Sponsor: Cortland

P.I. - Dr. Carl N. Schroeder, Assistant Superintendent for Elementary Education
R.C. - Mr. Robert F. Bickel, Principal, Randall School

Duration: 3 years C   Total Expenditure: $25,021

A-33-60 Continuation of Madison Project from Seventh Grade to Eighth Grade

Sponsor: Syracuse

P.I. - Mr. William F. Bowin, Supervisor of Mathematics
R.C. - Mr. David Sine, Director of Research

Duration: 2 years C   Total Expenditure: $12,902

A-34-60 Study Skills for Above-Average High School Pupils

Sponsor: Binghamton

P.I. - Mr. Maxwell E. Space, Director of Academic Studies
R.C. - Dr. Marvin D. Glock and Dr. Jason Millman, Cornell University

Duration: 3 years C   Total Expenditure: $8,040

A-35-60 Structural Lingusistics in the Junior High School

Sponsor: Brentwood

P.I. - Mr. Harold Morine, Queens College
R.C. - Dr. Raymond Scheele, Hofstra College

Duration: 2 years C Total Expenditure: $7,364

A-36-60 Conservation of Talent: Can the Underachiever Be Saved?

Sponsor: Schenectady

P.I. - Mr. Joseph Collins, Principal, Mont Pleasant High School
R.C. - Dr. Clare W. Graves, Union College

Duration: 2 years CNA Total Expenditure: $23,842

A-37-60 Effects of Teaching Foreign Language in the Elementary School

Sponsor: Hicksville

P.I. - Mr. William J. Campbell, Director of Research

Duration: 4 years C Total Expenditure: $93,395

A-38-60 Enrichment Through Closed-Circuit Television

Sponsor: Plainedge

P.I. - Mr. Dalton Levy, Audio-Visual Director, Plainedge High School
R.C. - Dr. Richard Runyon, C. W. Post College

Duration: 2 years C Total Expenditure: $31,396

A-39-60 Class Size, Teaching Method, and High School Achievement

Sponsor: Pittsford

P.I. - Mr. Bernard W. Kinsella, Director of Instruction
R.C. - Dr. Clarence Williams, University of Rochester

Duration: 2 years CNA Total Expenditure: $9,444

A-40-60 Seminar Program for Able and Ambitious High School Students

Sponsors: Milford, Abraham S. Kellogg, Andes, Andrew S. Draper, Charlotte Valley, Cherry Valley, Delaware, Downsville Edmeston, Franklin, Gilbertsville, Grand Gorge, Hancock, Laurens, Margaretville, Morris, New Berlin, Otego, Richfield Springs, Roxbury, South Kortright, Springfield, Unadilla, Worcester

P.I. - Dr. Royal F. Netzer, President, State University College of Education at Oneonta
R.C. - Dr. Reuben R. Rusch, State University College of Education at Oneonta

Duration: 2 years C — Total Expenditure: $38,601

A-41-60 Children's Ability to Identify Assumptions in Science

Sponsor: Great Neck

P.I. - Mr. George Reynolds, Elementary Curriculum Coordinator
R.C. - Dr. Darrell Barnard, New York University

Duration: 2 years CNA — Total Expenditure: $683

A-42-61 Patterns of Basic Skill Growth: Ages 9-11

Sponsor: Albany

P.I. - Dr. Conwell Higgins, Director of Research
R.C. - Dr. Reuben Rusch, State University College of Education at Oneonta

Duration: 1 year D — Total Expenditure: $12,537

A-43-61 An Independent Honors Program for the Academically Talented

Sponsor: Bedford (Mt. Kisco)

P.I. - Mr. Charles Sansone, Chairman, Citizenship Education Department, The Fox Lane School
R.C. - Dr. Francis G. Cornell, Educational Research Services, Inc.

Duration: 3 years C — Total Expenditure: $63,463

A-44-61 Utilization of Teacher Education Students as Teacher Aides

Sponsor: Bethlehem

P.I. - Dr. Virgil E. Tompkins, Principal, Bethlehem Central Senior High School

Duration: 1 year A (A-68-62) Total Expenditure: $9,693

A-45-61 Program Learning and Creativity for the Gifted Child

Sponsor: Farmingdale

P.I. - Mr. Nicholas Massa, School Psychologist
R.C. - Dr. Lassar Gotkin, Center for Programmed Instruction
Dr. Frederic L. Matthews, STACO, Inc.

Duration: 2 years C Total Expenditure: $19,450

A-46-61 TV Teaching of Reading and Study Skills, Grades 7-12

Sponsor: Harrison

P.I. - Dr. Clayton A. Friis, Director of Curriculum and Instruction

Duration: 1 year A (A-68-62) Total Expenditure: $32,118

A-47-61 Early Identification of the Gifted Through Interage Grouping

Sponsor: Plainedge

P.I. - Mrs. Marie J. Yerry, Principal, John H. West School
R.C. - Dr. Richard Runyon, C. W. Post College

Duration: 2 years A (A-72-63) Total Expenditure: $23,817

A-48-61 Use of a Developmental Index to Predict Pupil Achievement

Sponsor: Roslyn

P.I. - Dr. John E. Owens, Director of Instructional Services
R.C. - Dr. Roscoe C. Brown, Jr., New York University

Duration: 3 years C Total Expenditure: $10,958

A-49-61 Followup of Elementary French Program on TV

Sponsor: Schenectady

P.I. - Mr. Warren J. Tarrant, Elementary French Teacher
R.C. - Mr. William H. Dunstan, Director of Research, Child Accounting and Testing

Duration: 1 year C   Total Expenditure: $6,317

A-50-61 Large and Small Group Instruction in English

Sponsor: Sewanhaka

P.I. - Mr. Alfred B. Caine, Acting Principal of the District
R.C. - Mr. William C. Rock, Administrative Intern for Research

Duration: 1 year C   Total Expenditure: $3,361

A-51-61 Teaching Reading Through Seventh-Grade Science Content

Sponsor: Sewanhaka

P.I. - Dr. Harold L. Herber, District Reading Coordinator
R.C. - Mr. William C. Rock, Administrative Intern for Research

Duration: 1 year C   Total Expenditure: $10,442

A-52-61 The Madison Project Method in Elementary School Mathematics

Sponsor: Syracuse

P.I. - Mr. William F. Bowin, Supervisor of Mathematics
R.C. - Mr. David Sine, Director of Research

Duration: 1 year CNA   Total Expenditure: $3,431

A-53-61 Mental Age Placement of Elementary Science Activities

Sponsor: Tompkins-Seneca BOCES-Dryden, Groton, Interlaken, Lansing, Newfield, Ovid, Romulus, Trumansburg

P.I. - Miss Betty J. McKnight, Director of Research in Elementary Science
R.C. - Dr. Jason Millman, Cornell University

Duration: 3 years C   Total Expenditure: $29,375

A-54-61 Centralized Guidance Services and the Academically Talented

Sponsor: Westchester County BOCES #1 - Bedford, Briarcliff Manor, Chappaqua, Hendrick-Hudson, Katonah-Lewisboro, Lakeland, North Salem, Somers, Yorktown Heights

P.I. Dr. C. C. Dunsmoor, Director, BOCES Guidance Center
R.C. Dr. Francis G. Cornell, Educational Research Services, Inc.

Duration: 1 year CNA — Total Expenditure: $2,659

A-56-61 New Design in Language Arts Teaching in Intermediate Grades

Sponsor: Bethlehem

Mrs. Doris Flinton, Elementary Reading Consultant
R.C. - Dr. Morris Eson, State University College of Education at Albany

Duration: 1 year D — Total Expenditure: $3,693

A-60-62 The Development and Evaluation of Programmed Spelling--Grade 3

Sponsor: New York City

P.I. - Dr. Fred Guggenheim, School Research Associate

Duration: 2 years C — Total Expenditure: $55,579

A-61-62 Study of Three Types of Language Laboratory Experiences

Sponsor: New York City

P.I. - Mrs. Sarah W. Lorge, Language Consultant, Bureau of Audio-Visual Instruction
R.C. - Dr. Abraham Tannenbaum, Yeshiva University

Duration: 1 year C — Total Expenditure: $56,027

A-63-62 Patterns of Achievement Among College-Bound Students

Sponsors: Pearl River, Brighton, Harrison, Jamestown, Liverpool, Mechanicville, Nyack, Penfield, Suffern, West Irondequoit

P.I. - Mr. Walter Reiner, Principal, Pearl River High School
R.C. - Mr. Charles M. Armstrong, New York State Education Department

Duration: 1 year C — Total Expenditure: $13,971

A-65-62 Meeting Needs of Gifted: A Non-Structured Summer Program

Sponsor: Plainview

P.I. - Dr. Carl M. Winston, Research Chairman

Duration: 1 year CNA Total Expenditure: $15,596

A-68-62 An Exploratory Study of Tenth Grade Achievement

Sponsors: Bethlehem, Harrison, New Hartford

P.I. - Dr. Harold Bookbinder, Director of Program Development & Guidance, Bethlehem Central School
R.C. - Dr. Frederic L. Matthews, STACO, Inc.

Duration: 1 year C Total Expenditure: $23,779

A-71-63 Specialized Tutorial Program for High School Students

Sponsor: Jamesville-DeWitt

P.I. - Mr. Olcott Gardner, Science Teacher

Duration: 1 year CNA Total Expenditure: $1,333

A-72-63 Effects of Interage Grouping on Achievement and Behavior-Elementary School

Sponsor: Plainedge

P.I. - Mrs. Marie J. Yerry, Principal, John H. West School
R.C. - Dr. Edward Henderson, New York University

Duration: 1 year A (A-73-63) Total Expenditures: $6,380

PROJECTS CURRENTLY IN OPERATION

A-55-61 Improving the Achievement of Bright Underachievers

Sponsor: West Irondequoit

P.I. - Dr. Byron B. Williams, University of Rochester
R.C. - Dr. John A. Schmitt, University of Rochester

Total expenditure including current estimate: $35,198

A-57-62 Conventional vs. Large-Group Instruction in Chemistry

Sponsors: Amherst, Akron, Alden, Brighton, Canandaigua, Clarence, Cleveland Hills, Eden, Hamburg, Kenmore, Orchard Park, Rochester, West Seneca, Williamsville

P.I. - Dr. Stephen S. Winter, State University of New York at Buffalo
R.C. - Dr. S. David Farr, State University of New York at Buffalo
Drs. John J. Montean and John A. Schmitt, University of Rochester

Total expenditure including current estimate: $91,257

A-58-62 Value of Reading Instruction to Selected Kindergarteners

Sponsors: Copiague, East Williston, Jericho, Newburgh, Wyandanch

P.I. - Dr. Florence Heisler, Brooklyn College
R.C. - Dr. Francis Crowley, Fordham University

Total expenditure including current estimate: $47,312

A-59-62 Improving Competence in English Expression-Grades 9 and 10

Sponsors: East Islip, Bethlehem, East Greenbush, East Hampton, Guilderland, Half Hollow Hills, Levittown, Long Beach, Manlius, New Hartford, Rye Neck, Wantagh

P.I. - Dr. Benjamin Rosner, Educational Testing Service

Total expenditure including current estimate: $224,662

A-62-62 Independent Study/Seminar Evaluation at Elementary Level

Sponsor: Oyster Bay

P.I. - Dr. Daniel F. Stevens, Principal, Theodore Roosevelt School
R.C. - Dr. Miriam Goldberg, Teachers College, Columbia University

Total expenditure including current estimate: $20,391

A-64-62 Effects of Team Teaching on Pupil Use of Scientific Reasoning-Grades 4 and 5

Sponsor: Plainview

P.I. - Mr. Leonard Kramer, Principal, Central Park Road School
R.C. - Dr. Gilbert M. Trachtman, New York University

Total expenditure including current estimate: $50,594

A-66-62 Above-Average Intelligence Test Scores and School Achievement

Sponsor: Ballston Spa

P.I. - Dr. Bert Friedman, School Psychologist

Total expenditure including current estimate: $2,750

A-69-63 A Community Resource Pool and Adolescent Impressions of Professional Fields

Sponsor: South Orangetown

P.I. - Dr. Stanley L. Raub, Superintendent
R.C. - Dr. Richard Clark, State University College of Education at Oneonta
Dr. Reuben R. Rusch, State University of New York at Albany

Total expenditure including current estimate: $31,364

A-70-63 An Exploration of Three Methods of Instruction in Grades 5, 6, and 7

Sponsor: Rochester

P.I.- Dr. William C. Rock, Administrative Director, Department of Planning and Research
Mrs. Marjorie Lehman, Chairman, Programmed Learning Project
R.C.- Dr. Thomas R. Knapp, University of Rochester

Total expenditure including current estimate: $37,828

A-73-63 Evaluation of the Nongraded Primary

Sponsors: Bainbridge, East Irondequoit, Glen Cove, Hastings-on-Hudson, Marion, Maryvale, Niagara Falls, Plainedge, Port Washington, Vestal, West Irondequoit, Yorktown Heights

P.I. - Dr. William P. McLoughlin, St. John's University

Total expenditure including current estimate: $111,009

A-74-64 Identifying the Bright Underperforming Elementary Pupil

Sponsor: Guilderland

P.I. - Mr. William J. Smith, School Psychologist
Dr. John H. Rosenbach, State University of New York at Albany
R.C. - Dr. Robert McMorris, State University of New York at Albany

Total expenditure including current estimate: $4,8000

A-75-64 Beginning Reading-The Effectiveness of i/t/a and T.O.

Sponsor: Nassau School Development Council - East Meadow, Hewlett-Woodmere, Island Park, Lawrence, Locust Valley, Plainview, Rockville Centre, Seaford, South Huntington, Valley Stream #13, Valley Stream #24

P.I. - Dr. Harold J. Tanyzer, Hofstra University
R.C. - Dr. Harvey Alpert, Hofstra University

Total expenditure including current estimate: $12,495

A-76-64 An Experimental Evaluation of Team Teaching in Biology

Sponsor: Genesee Valley School Development Association - Brighton, East Irondequoit, East Rochester, Greece, Rochester, Rush-Henrietta

P.I. - Mr. David B. Robinson, Assistant District Principal, Greece Central School
R.C. - Dr. John A. Schmitt, University of Rochester

Total expenditure including current estimate: $14,100

A-77-64 An Independent Study Program for the Academically Able

Sponsors: Ardsley, Arlington, Cold Spring, Eastchester, Half Hollow Hills, Middletown, Northport, Port Jefferson, Rye Neck, Valhalla, Wappingers Falls, Webutuck

P.I. - Dr. Francis J. Lodato, Manhattan College
R.C. - Dr. Joseph W. Halliwell, Paterson State College, Wayne, New Jersey

Total expenditure including current estimate: $33,737

A-78-64 Applying Conceptual Teaching in the Social Studies

Sponsors: Albany, Bethlehem, Corinth, Gloversville, Greenwich, Guilderland, Hoosick Falls, Ilion, Little Falls, Niskayuna, Ravena, South Colonie, Utica, Waterford, and Milne High School, State University of New York at Albany

P.I. - Mrs. Bertha Davis, Christopher Columbus High School, New York City
R.C. - Dr. Thomas Vris, New York University

Total expenditure including current estimate: $13,452

A-79-64 The Frostig as a Predictor of Reading Difficulties

Sponsor: Greece

P.I. - Mr. Edward B. Homsey, School Psychologist
R.C. - Dr. Emory L. Cowen, University of Rochester

Total expenditure including current estimate: $14,247

A-80-64 A Unitized, Inter-Disciplinary Social Studies Program

Sponsor: Yorktown Heights

P.I. - Mrs. Mary M. Uhler, Chairman, Social Studies Department
R.C. - Dr. Joseph Halliwell, Paterson State College, Wayne, New Jersey

Total expenditure including current estimate: $8,259

A-81-64 A Study of the Educational Value of Prekindergarten Programs for Socially Disadvantaged Children

Sponsors: Hempstead, Long Beach, New Rochelle, Schenectady, Spring Valley,

P.I. - Dr. Louis T. DiLorenzo, New York State Education Department

Total expenditure including current estimate: $78,759